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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,973	06/27/2001	Hoon Huh	678-683 (P9823)	3813

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EXAMINER	
SHAH, CHIRAG G	

ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/892,973	HUH ET AL.	
	Examiner	Art Unit	
	Chirag G. Shah	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15,19-23,29-43 and 47-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,9-13,29-34,37-41 and 47-49* is/are rejected.

7)☒ Claim(s) *7,8,14,15,22,23,35,36,42,43,50 and 51* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6, 9-13, 29-34, 37-41, and 47-49 rejected under 35 U.S.C. 103(a) as being unpatentable over Padovani et al. (U.S. Patent No. 6574211, herein after, Padovani in view of Laroia et al. (U.S. Patent No. 6,708,040), herein after, Laroia.

3. Referring to claims 1, 9, 19, 29, 37, and 47, Padovani discloses in col. 6, lines 51-67, figures 1 and 5 and in the abstract of an apparatus [mobile station] and a method for controlling transmission of a data packet from an access network (AN) [base station] an access terminal (AT) [mobile station] of a mobile telecommunication system where the AN [base station] transmits the data packet in successive time slots each having a plurality of data bits [as disclosed col. 6, lines 35-57and illustrated in figure 5] and the AT [mobile station] receives the data packet from the AN [as illustrated in figure 5 and disclosed in col. 6, lines 51-67], the apparatus comprising step of:

a device for comparing a C/I of a forward pilot signal received from the AN [base station] with a predetermined first threshold [as disclosed in col.6 51-67, the mobile station measures the signal-to-noise-and interference ration C/I of the forward link pilot from the base station in the

active set, as received at the mobile station and compares the received pilot signal with a predetermined add threshold];

a device for decoding a data packet in a received time slot and checking for errors in the decoded data packet if the received power is greater than the first threshold [as disclosed in col. 7, lines 59 to col. 8, lines 19, and claim 5, the mobile station, for which the data packet is intended, receives the data transmission and decodes the data packet; the mobile stations are able to identify either missed or duplicative, bit-error rate or packet error rate etc... transmissions (errors) and if the power of the signal received exceeds a predetermined threshold]; and

Padovani teaches in col. 7, lines 18-47 and 59 to col. 8, lines 7 and in the abstract that if errors occurs, the mobile stations communicate via the reverse link channel a NACK to communicate with the base station for retransmission. Padovani, however, fails to disclose a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet

Laroia, teaches of link level support of wireless data. Laroia discloses in col. 1, lines 57 to col. 2, lines 12, that the mobile station monitors pre-specified signal assignment segments for messages from the base station. Upon receiving a message (without error), the mobile station sends an appropriate acknowledgment message to the base station, thus, the acknowledgment message is a signal providing an indication to the base station to terminate the retransmission of the data packet since no errors are found and the data packet/message has reached the mobile station successfully. Furthermore, Laroia discloses in col. 2, lines 9-22, upon receiving a corresponding acknowledgment

message from the mobile unit, the base station performs actions specified in the message, this implies, the action being no retransmissions since no error occurred.

Therefore, it would have been obvious to one of ordinary skills in the art to modify the teachings of Padovani to include transmitting the ack signal from the mobile station to the base station upon detecting no errors in order to provide a consistent state transition. The motivation of a consistent state transition constitutes further delay from arising and reduction in overhead.

4. Referring to claims 2, 10, 20, 30, 38, and 48, Padovani further discloses comprising the steps of:

determining whether it is a low data rate using a length of a preamble of the received data packet [as disclosed in col. 23, lines 31-37, length of the a preamble is a function of the data packet as illustrated in table 3]; and

proceeding further with the comparison step if the determined data rate is the low data rate, wherein the low data rate repeatedly transmits the same packet two times or more [as disclosed in col. 25, lines 66 to col. 26, lines 10 that when a base station has less data to transmit to mobile station than the space available in the data field, packet format 430 is used, which allows a base station to transmit any number of data units up two the maximum number of data units, suggesting that same packet may be repeatedly transmitted two time].

5. Referring to claims 3, 11, and 31, Padovani further discloses of comprising:

a device for determining a data rate corresponding to the received power if errors are found in the decoded data packet [as disclosed in the abstract, in addition to disclosure in col. 7,

lines 59 to col. 8, lines 19, and claim 5, the data rate is determined by the largest C/I measurement of the forward link signals corresponding to determination of data packets received in errors], and

a device for requesting retransmission of the data packet by transmitting the determined data rate to the AN [as disclosed in the abstract, upon determination of data packets received in error, the mobile station transmits a NACK message back to the base station for retransmission of packets received in error] as claim.

6. Referring to claims 4, 13, 32, and 39, Padovani discloses further of comprising:

a device for determining a data rate corresponding to the received power if the received power is equal to or less than the first threshold [as disclosed in col. 6, lines 49-67, the mobiles station measures the signal-to-noise-and –interference ratio (C/I) of the forward link pilot from eh base stations in the active set and if the received pilot signal is below a predetermined first drop rate, the mobile station reports this to the base station]; and

a device for requesting retransmission of the data packet by transmitting the determined data rate to the AN [Padovani discloses in col. 7, lines 18-47 and 59 to col. 8, lines 7 and in the abstract that if errors occurs, the mobile stations communicate via the reverse link channel a NACK to communicate with the base station for retransmission] as claim.

7. Referring to claims 5, 12, 33, and 40, Padovani discloses further of comprising:

a device for comparing the received power with a predetermined second threshold if the received power is equal to or less than the first threshold [as discloses in col. 6, lines 49-67, the

mobile device compares if the received pilot signal C/I is above a predetermined add threshold or below a predetermined drop threshold]; and

Padovani discloses if the receive pilot signal is above a predetermined add threshold or below a predetermined drop threshold, the mobile station reports this to the base station, in other words, a retransmission is needed, since the received power is less than the second threshold and the power falls within the range of two thresholds, no error has occurred.

However, Padovani fails to disclose of transmitting the signal requesting termination of retransmission. Laroia, teaches of link level support of wireless data. Laroia discloses in col. 1, lines 57 to col. 2, lines 12, that the mobile station monitors pre-specified signal assignment segments for messages from the base station. Upon receiving a message (without error), the mobile station sends an appropriate acknowledgment message to the base station, thus, the acknowledgment message is a signal providing an indication to the base station to terminate the retransmission of the data packet since no errors are found and the data packet/message has reached the mobile station successfully. Furthermore, Laroia discloses in col. 2, lines 9-22, upon receiving a corresponding acknowledgment message from the mobile unit, the base station performs actions specified in the message, this implies, the action being no retransmissions since no error occurred. Therefore, it would have been obvious to one of ordinary skills in the art to modify the teachings of Padovani to include transmitting the ack signal from the mobile station to the base station upon detecting no errors in order to provide a consistent state transition. The motivation of a consistent state transition constitutes further delay from arising and reduction in overhead.

8. Referring to claims 6, 21, 34, 41 and 49, Padovani further discloses of comprising:

a device for comparing the received power with a predetermined second threshold if the received power is equal to or less than the first threshold [as discloses in col. 6, lines 49-67, the mobile device compares if the received pilot signal C/I is above a predetermined add threshold or below a predetermined drop threshold];;

a device for determining the data rate corresponding to the received power if the received power is equal to or greater than the second threshold [as disclosed in col. 7, lines 49-67]; and

a device for requesting retransmission of the data packet by transmitting the determined data rate to the AN [as disclosed in col. 7, lines 18-47 and 59 to col. 8, lines 7 and in the abstract that if errors occurs, the mobile stations communicate via the reverse link channel a NACK to communicate with the base station for retransmission].

Allowable Subject Matter

9. Claims 7, 8, 14,15, 22, 23, 35, 36, 42, 43, 50, and 51 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments filed 5/11/05 have been fully considered but they are not persuasive.

11. Applicant argues that Padovani does not disclose determining if data is decoded according to the measurement of the signal, or a transmission of the ACK/NACK signal. In

response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., determining if data is decoded according to the measurement of the signal, or a transmission of the ACK/NACK signal) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

12. Applicant further argues specifically in claims 1 and 29 that a mobile station checks an error of a data packet only when a received C/I is higher than a threshold. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a mobile station checks an error of a data packet only when a received C/I is higher than a threshold) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

13. Applicant additionally argues that the combination of Padovani and Laroia is not reasonable, as Padovani and Laroia are different from each other, because the object and the construction for requesting the termination of the retransmission, as well as the operation of measuring the C/I, differ from each other. Examiner respectfully disagrees. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally

available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Laroia clearly discloses in col. 4,lines 45-59, the purpose of an acknowledgment message is to provide a consistent state transition and to eliminate unnecessary state transition. Thus by sending an acknowledgement messages from the mobile station to the base station as taught in col. 1 lines 57 to col. 2, lines 12, clearly suggests and or implies that no errors occurred and therefore no retransmission are necessary.

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any response to this final action should be mailed to:

Box AF
Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(571)272-8300, (for formal communications; please mark "EXPEDITED PROCEDURE)

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag G. Shah whose telephone number is 571-272-3144. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cgs
July 18, 2005

Ajit Patel
Primary Examiner